

# Peroxin 3 (C-16): sc-107926

## BACKGROUND

Peroxisomes are single-membrane bound organelles present in virtually all eukaryotic cells. They are involved in numerous catabolic and anabolic pathways, including  $\beta$ -oxidation of very long chain fatty acids, metabolism of hydrogen peroxide, plasmalogen biosynthesis and bile acid synthesis. The Peroxin family, which includes more than 20 members, is required for peroxisome biogenesis. Peroxin 3, also known as PEX3 (peroxisomal biogenesis factor 3) or TRG18, is a 373 amino acid multi-pass membrane protein that localizes to peroxisomes and belongs to the Peroxin family. Expressed ubiquitously, Peroxin 3 interacts with Peroxin 19 and is involved in peroxisome biosynthesis and membrane vesicle assembly, as well as in the maintenance of peroxisomal integrity. Additionally, Peroxin 3 acts as a docking factor for Peroxin 19 and is required for the import of peroxisomal proteins. Defects in the gene encoding Peroxin 3 are the cause of peroxisome biogenesis disorder complementation group 12 (PBD-CG12) and Zellweger syndrome (ZwS), both of which arise from a failure of peroxisomal protein import.

## REFERENCES

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- Muntau, A.C., et al. 2003. Interaction of PEX3 and PEX19 visualized by fluorescence resonance energy transfer (FRET). *Adv. Exp. Med. Biol.* 544: 221-224.
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- Fang, Y., et al. 2004. PEX3 functions as a PEX19 docking factor in the import of class I peroxisomal membrane proteins. *J. Cell Biol.* 164: 863-875.
- Sato, Y., et al. 2008. Characterization of the interaction between recombinant human peroxin Pex3p and Pex19p: identification of TRP-104 IN Pex3p as a critical residue for the interaction. *J. Biol. Chem.* 283: 6136-6144.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## CHROMOSOMAL LOCATION

Genetic locus: PEX3 (human) mapping to 6q24.2; Pex3 (mouse) mapping to 10 A2.

## SOURCE

Peroxin 3 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Peroxin 3 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107926 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Peroxin 3 (C-16) is recommended for detection of Peroxin 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Peroxin family members.

Suitable for use as control antibody for Peroxin 3 siRNA (h): sc-95091, Peroxin 3 siRNA (m): sc-152174, Peroxin 3 shRNA Plasmid (h): sc-95091-SH, Peroxin 3 shRNA Plasmid (m): sc-152174-SH, Peroxin 3 shRNA (h) Lentiviral Particles: sc-95091-V and Peroxin 3 shRNA (m) Lentiviral Particles: sc-152174-V.

Molecular Weight of Peroxin 3: 42 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.